



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/029,609	12/20/2001	Jason F. Hunzinger	09752-149001	4538

27572 7590 05/05/2004

HARNESS, DICKEY & PIERCE, P.L.C.
P.O. BOX 828
BLOOMFIELD HILLS, MI 48303

EXAMINER

CHOW, CHARLES CHIANG

ART UNIT PAPER NUMBER

2685

DATE MAILED: 05/05/2004

14

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/029,609

Applicant(s)

HUNZINGER, JASON F.

Examiner

Charles Chow

Art Unit

2685

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 2/17/2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 18-27, 44, 45 and 48-50 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 48-50 is/are allowed.
- 6) ☒ Claim(s) 18-27, 44 and 45 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Office Action for Amendment
Received on 2/17/2004

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 18, 20, 22-23, 26, 44-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spear (US 4,811,380) in view of Rappaport (US 6,477,373 B1).

Regarding **claim 18**, Spear teaches a mobile station (Radio telephone unit 130, Fig. 1C) for use in wireless communication system (cellular radiotelephone system, Fig. 1A; col. 2, line 64; col. 2, line 58 to col. 3, line 18), for protecting dropped call, according to the determining means of the radio telephone 130 to request call reconnection (abstract; col. 1, lines 6-13; Fig. 4, reconnection 440). Spear teaches a transceiver which transmits a connection request to the wireless comm. system (Fig. 1C, the receiver 144/transmitter 146 for transmitting of the call reconnection request, in abstract). Spear teaches the microcomputer in supervisory unit 150 which determines the connection request fails (the radiotelephone comprising first means for determining the active call has been lost, to indicate to system of the request for reconnection of the lost call; col. 9, line 46 to col. 10, line 8). Spear teaches the signal strength parameter is monitored for identifying the reason of the lost call or failure (in col. 5, lines 50-65, Fig. 1C, 156). Spear teaches the connection request failure, the reconnection

request by transmitting a specially coded message from radiotelephone to a base station for request for reconnection based on the specially coded message (col. 6, lines 34-56).

Spear fails to teach the transmitted parameter which identifies a communication protocol reason and a number of failures have occurred for the same communication protocol reason. However, Reppaport teaches the transmitted parameter which identifies a communication protocol reason and a number of failures have occurred for the same communication protocol reason, the transmitting of reason for connection request failure and a number of connection request failures have occurred for the same protocol reason [the reactivating a session for a request from wireless terminal, by transmitting from wireless terminal for at least one attribute corresponding to a service level, a session type, a mobile platform mobility, a priority call, or in combination, for the reactivating a session by transmitting above reconnection request for reconnection again, for the same protocol reason (col.37, line 64 to col. 38, line 9)]. Rappaport teaches the service level, session type, and platform mobility, which are the same communication protocol reasons of the connection failure being used before, as well as, in current reconnection request. In col. 6, lines 33-63, Rappaport teaches the request for new session having with retry attempt indication for failed suspended session, and the reconnection of the failed suspended session has a maximum number of reconnection attempts allowed (col. 6, line 64 to col. 7, line 14). The maximum number of reconnection attempts is associated with the transmitted service level, session type, platform mobility (col. 13, line 24 to col. 14, line 19; col. 38, lines 27-36), therefore, the number of failure is also indicated in the transmitted message having the service level, session type, platform mobility.

Art Unit: 2685

Rappaport teaches the reactivating a session request with messages which indicate the reasons for reconnection of whether due to service level, session type, platform mobility.

Rappaport teaches the efficient automatic and transparently attempting to reconnect the failure links for a mobile communication system, based upon the call types, platform mobility, handoff status, and user class criteria, with a counter for maximum number of reconnection attempts (abstract, col. 1, lines 20-26; col. 2, lines 23-58). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Spear above, and to include Rappaport's efficient automatic, transparent, reconnection for the connection failure, such that the mobile system could efficiently establish the call connection.

Regarding **claim 20**, Rappaport teaches in claim 18 above the connection request including service level, attributes, priority level (col. 38, lines 3-18), for the connection request.

Regarding **claim 22**, Rappaport teaches in claim 18, the reason for the previously failed reconnection attempt (the counting of the reconnection attempt for the same failure reason until reaching maximum allowed number of reconnection attempt) is the group consisting of an access failure (the group in service level, the platform mobility, the priority level), a lack of resources, an acknowledgement failure, a connection denial, and lack of channel assignment (occupied channel in col. 30, lines 13-26; bandwidth and resource in col. 13, line 65 to col. 14, line 19).

Regarding **claim 23**, Spear teaches the transmitting of the first connection request from the radiotelephone 130 to first base station (abstract), the second reconnection request to second base station (in abstract).

Art Unit: 2685

Spear fails to teach the assigning a parameter which identifies a reason for the first connection request failure and a number of connection request failures that have occurred for the same reason, and transmitting a second connection request including the parameter. However, Rappaport teaches the assigning a parameter which identifies a reason for the first connection request failure and a number of connection request failures that have occurred for the same reason, and transmitting a second connection request including the parameter, the reactivating a session for a request from wireless terminal, by transmitting from wireless terminal for at least one attribute corresponding to a service level, a session type, a mobile platform mobility, a priority call, or in combination, for the reactivating a session by transmitting above reconnection request for reconnection again, for the same protocol reason (col.37, line 64 to col. 38, line 9). The service level, session type, and platform mobility are the reasons of connection failure which being used before as well as in this reconnection request. In col. 6, lines 33-63, Rappaport teaches the request for new session having with retry attempt indication for failed suspended session, and the reconnection of the failed suspended session has a maximum number of reconnection attempts allowed (col. 6, line 64 to col. 7, line 14). The maximum number of reconnection attempts is associated with the transmitted service level, session type, platform mobility (col. 13, line 24 to col. 14, line 19; col. 38, lines 27-36), therefore, the number of failure is also indicated in the transmitted service level, session type, and platform mobility, and Rappaport teaches the reactivating a session request with messages which indicate the reasons of reconnection for whether due to service level, session type, platform mobility. Rappaport teaches the efficient automatic and

Art Unit: 2685

transparently attempting to reconnect the failure links for a mobile communication system, based upon the call types, platform mobility, handoff status, and user class criteria, with a counter for maximum number of reconnection attempts (abstract, col. 1, lines 20-26; col. 2, lines 23-58). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Spear above, and to include Rappaport's efficient automatic, transparent, reconnection for the connection failure, such that the mobile system could efficiently establish the call connection.

Regarding **claim 26**, Rappaport teaches the reason for the connection request failure is one of the group consisting an access failure, (the group in service level, the platform mobility, the priority level), a lack of resources, an acknowledgement failure, a connection denial, and lack of channel assignment (occupied channel in col. 30, lines 13-26; bandwidth and resource in col. 13, line 65 to col. 14, line 19).

Regarding **claims 44**, Spear teaches a mobile station for use in wireless communication system comprising a transceiver (144,146, Fig. 1C) for transmitting connection request to wireless communication system (Fig. 1) having a processor 150, 156, 158).

Spear fails to teach the transmitting along with a parameter which identifies a reason for the most recent connection request fail and a number of connection request failures that have occurred for the same reason wherein the connection request may have failed for two of more different reasons. However, Rappaport teaches the above claimed features, the reactivating a session for a request from wireless terminal, by transmitting from wireless terminal for at least one attribute corresponding to a service level, a session type, a mobile platform

Art Unit: 2685

mobility, a priority call, or in combination, for the reactivating a session by transmitting above reconnection request for reconnection again, for the same protocol reason (col.37, line 64 to col. 38, line 9). The service level, session type, and platform mobility are the reasons of connection failure which being used before as well as in this reconnection request. In col. 6, lines 33-63, Reppaport teaches the request for new session having with retry attempt indication for failed suspended session, and the reconnection of the failed suspended session has a maximum number of reconnection attempts allowed (col. 6, line 64 to col. 7, line 14). The maximum number of reconnection attempts is associated with the transmitted service level, session type, platform mobility (col. 13, line 24 to col. 14, line 19; col. 38, lines 27-36), therefore, the number of failure is also indicated in the transmitted service level, session type, and platform mobility, and Rappaport teaches the reactivating a session request with messages which indicate the reasons of reconnection for whether due to service level, session type, platform mobility. Rappaport teaches the efficient automatic and transparently attempting to reconnect the failure links for a mobile communication system, based upon the call types, platform mobility, handoff status, and user class criteria, with a counter for maximum number of reconnection attempts (abstract, col. 1, lines 20-26; col. 2, lines 23-58). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Spear above, and to include Rappaport's efficient automatic, transparent, reconnection for the connection, such that the mobile system could efficiently establish the call connection.

Art Unit: 2685

Regarding **claim 45**, the failure comprising a communication protocol failure from Rappaport above, the communication of protocol failure including service level, session type, platform mobility or in combination.

2. Claims 19, 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spear in view of Rappaport, as applied to claim 18 above, and further in view of Tiedemann Jr. et al. (US 5,999,816).

Regarding **claim 19**, Spear and Rappaport teaches the claimed features in claim 18. Spear and Rappaport fail to teach the using said stored parameters.

However, Tiedemann teaches the adapting system access parameters using stored parameters (the method and apparatus for mobile assisted handoff, title, abstract). The mobile station transmits parameter data having pilot search list for reattempting of establishing connection to the wireless system, and the search list is the stored parameter in the mobile station, such that the mobile could transmit the search offset list to the system for establishing connection, col. 19, lines 46-65). It would be obviously to include Tiedemann's stored parameter data for establishing the connection, such that the system would efficiently provide the service based upon the received parameter information. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Spear above, and to include Tiedemann's stored parameter data for establishing the connection, to Spear as modified above, such that the system would efficiently provide the service based upon the received parameter information.

Art Unit: 2685

Regarding **claim 21**, referring to examiner's comment in Tiedemann that the transceiver receives instruction based on the parameter data and to determine a time to reattempt the connection or waiting for a interval after the attempt/reattempt connection in shown in col. 19, lines 46-65).

3. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Spear in view of Rappaport, as applied to claims 23 above, and further in view of Wicher et al. (US 5,608,643).

Regarding **claim 24**, referring to examiner comment in claim Amin above for the number of time failed for particular parameter reason; and the failures parameter for reconnection in Table 1. Wichter teaches the included transmitted message has retry count, reason code, for the next connection request.

Wichter teaches the transmitted message having a parameter indicating a number of times that the reason has occurred, and storing the parameter indicating the number of time that the reason has occurred (for the cellular radio network 12, Fig.1, which comprises the dispensing unit 10 for maintaining the stock food level in the Bins). The dispensing unit 10 transmits/receives information from the system controller 14 (col. 3, lines 59 to col. 4, line 5). Wichter teaches the dispensing unit 10 transmits communication-retry-counts and reason-code associated with the retried activity event to the controller 14, for the reconnection reasons (col. 8, lines 32-38). It would be obvious to include Wichter's transmitting of the retry count for establishing of the communication connection with the system controller 14,

Art Unit: 2685

such that the system could be upgraded with the information of the retried communication counts and reason codes, such that the system could efficiently determine the reconnection attempt situation based on the retry counts and reasons. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Spear, and to include Wichter's retry count for establishing the communication link, such that the system could efficiently determine the reconnection attempt situation based on the received retry counts and reason code.

4. Claim 25 is are rejected under 35 U.S.C. 103(a) as being unpatentable over Spear in view of Rappaport, Witcher, as applied to claim 24 above, and further in view of Amin.

Regarding **claim 25**, Spear and Rappaport fail to teach clearly of the receiving instruction for the next connection request. However, Amin et al. (Amin) teaches the receiving instruction for the next connection request, the sending a reconnection indication to the other device upon a successful reconnection (col. 8, lines 16-18). Amin teaches a system for determining of a reason that call has been dropped, and determining of whether make an attempt for the reconnection (col. 7, lines 13-25; col. 8, lines 47-58). Amin considers the reasons (table 1; col. 3, lines 51-63, col. 5, lines 1-18), mobile device for handoff with insufficient channels, or having coverage hole, with signal interference. Amin teaches the reasons for the failed connection, such that the system could accurately recover the connection based on the failure reasons. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Spear and Rappaport, and to include Amin's reconnection indication, such that the system could accurately recover the connection based on the failure reasons.

5. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Spear in view of Rappaport, as applied to claim 23 above, and further in view of Amin et al. (US 5,995,830). Regarding **claim 27**, Spear and Rappaport fails to teach the modifying the aggressiveness of the connection request. However, Amin et al. (Amin) teaches the modifying the aggressiveness of the connection request (the aggressiveness in the process of analyzing a mobile assisted handoff list previously received from said wireless telephone, col. 8, lines 46-47, the system for determining, modifying the aggressive, to find out a reason that call has been dropped, and determining of whether make an attempt for the reconnection (col. 7, lines 13-25; col. 8, lines 47-58). Amin considers the reasons (table 1; col. 3, lines 51-63, col. 5, lines 1-18), mobile device for handoff with insufficient channels, or having coverage hole, with signal interference. Amin teaches the reasons for the failed connection, such that the system could accurately recover the connection based on the failure reasons. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Spear and Rappaport, and to include Amin's aggressiveness analyzing the handoff list, the determining of a reason for call drop, such that the system could accurately recover from a failed connection, based upon the failure reasons.

Claim Allowable

6. Claims 48-50 is allowable over the prior art of record.

The following is the examiner's statement for the reasons of allowance:

The prior art fails to teach singly, particularly, or in combination, the subject matter for a mobile station for use in a wireless communication system comprising a processor that

determines a reconnection parameter when a reconnection attempt is carried out; a transceiver that transmits a connection request along with the reconnection parameter, wherein the reconnection parameter has a reason for the reconnection attempt and a number of reconnection attempt, the processor determines whether the reason is a first reason or a second reason, and the processor determines a first value for the number of reconnection attempt when the reason is the first reason and determines a second value for the number of reconnection attempt when the reason is the second reason, wherein the first value is the number of the reconnection attempt attributable to the first reason and the second value is the number of reconnection attempt attributable to the second reason, as shown in independent claim 48. The dependent claims are also allowable due to their dependency upon the independent claims.

The closest patent to Spear (US 4,811,380) teaches a radiotelephone comprises a first means for determining the active call which has been lost. The radiotelephone indicates to system of the request for reconnection of lost call (col. 9, line 46 to col. 10, line 8), having signal strength parameter monitoring for identifying the reason of the lost call or the reason for failure of connection (col. 5, lines 50-65), the transmitting of a special coded message from radiotelephone to a base station for request for reconnection (col. 6, lines 34-56). Spear fails to teach the processor for determining of whether the reason is a first reason or a second reason, and the processor determines a first value for the number of reconnection attempt when the reason is the first reason and determines a second value for the number of reconnection attempt when the reason is the second reason, wherein the first value is the

Art Unit: 2685

number of the reconnection attempt attributable to the first reason and the second value is the number of reconnection attempt attributable to the second reason.

Secondary reference from Rappaport-'373 B1 teaches the reactivating a session for a request from wireless terminal by transmitting from wireless terminal for at least one attribute corresponding to a service level, session type, mobile platform mobility, priority of a call, for reactivating a session (col. 37, line 64 to col. 38, line 9), the maximum number of reconnection attempts (col. 6, line 64 to col. 7, line 14). Rappaport fails to teach the processor determines a first value for the number of reconnection attempt when the reason is the first reason and determines a second value for the number of reconnection attempt when the reason is the second reason, wherein the first value is the number of the reconnection attempt attributable to the first reason and the second value is the number of reconnection attempt attributable to the second reason.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee, and to avoid processing delays, should preferably accompany the issue fee. Such submission should be clearly labeled "comments on statement of reasons for allowance".

Response to Arguments

7. Applicant's arguments filed 2/17/2004 have been fully considered but they are not persuasive.

Regarding applicant's amendment for no teachings for transmitting a reason for connection failure and a count of connection failure, claim 18 does not include the transmitting of a count of connection failure. Claim 18 has the transmitting of a connection request with only a

reason for the request failure. However, Rappaport teaches the reactivating a session for a request from wireless terminal, by transmitting from wireless terminal for at least one attribute corresponding to a service level, a session type, a mobile platform mobility, a priority call, or in combination, for the reactivating a session by transmitting above reconnection request for reconnection again, for the same protocol reason (col.37, line 64 to col. 38, line 9). Rappaport teaches the service level, session type, and platform mobility, which are the same communication protocol reasons of the connection failure being used before, as well as, in current reconnection request. In col. 6, lines 33-63, Rappaport teaches the request for new session having with retry attempt indication for failed suspended session, and the reconnection of the failed suspended session has a maximum number of reconnection attempts allowed (col. 6, line 64 to col. 7, line 14). The maximum number of reconnection attempts is associated with the transmitted service level, session type, platform mobility (col. 13, line 24 to col. 14, line 19; col. 38, lines 27-36), therefore, the number of failure is also indicated in the transmitted message having the service level, session type, platform mobility. Rappaport teaches the reactivating a session request with messages which indicate the reasons for reconnection of whether due to service level, session type, platform mobility. Rappaport teaches the efficient automatic and transparently attempting to reconnect the failure links for a mobile communication system, based upon the call types, platform mobility, handoff status, and user class criteria, with a counter for maximum number of reconnection attempts (abstract, col. 1, lines 20-26; col. 2, lines 23-58). In view of the cited references above, claims 18-27, 44-47,48-50 are remaining in the rejection manner.

Art Unit: 2685

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles Chow whose telephone number is (703)-306-5615.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban, can be reached at (703)-305-4385.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to: (703) 872-9314 (for Technology Center 2600 only)


Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Art Unit: 2685

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Charles Chow C.C.

April 19, 2004.


EDWARD F. URBAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600